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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,681	07/20/2006	Gyuyoung Han	126587-06091309	6543

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EXAMINER

ISSING, GREGORY C

ART UNIT	PAPER NUMBER
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3662

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09/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,681	HAN ET AL.	
	Examiner	Art Unit	
	Gregory C. Issing	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Specification

1. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the specification appears to be a literal translation from a foreign language and includes grammatical and idiomatic errors.
2. A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.
3. Applicant traverses the requirement for a substitute specification arguing that the specification is clear to the applicant. The requirement is not whether the applicant understands his own invention but that someone skilled in the art understands the invention as it is written in the specification. The applicant's comment is not persuasive and is contrary thereto. Applicant is required to thoroughly review the specification in its entirety to correct the idiomatic and grammatical errors persisting throughout the entire specification. A few examples, and by no means complete, are set forth below.

1:11-18 → “a GPS terminal positioning method and system in which each LD is allowed to transmit a plurality of LD pilot signals, which are generated by applying preset offsets to position pseudo noise codes predetermined in a code division multiple access (CDMA) system, respectively, thereby separating LD pilot signal receiving areas, at which LD pilot signals are received, from a GPS satellite-invisible area.”

1: 22-26 → “Since an internet communication service represented as the World Wide Web starts to get highlighted, the internet communication service has brought an enormous change to the human life from all viewpoints including the social, economic and political viewpoints.”

1:26-2:1 → “The internet has been currently recognized as a part of everyday life so that it . . .”

2:2-4 → “. . . network has been largely prevailed to provide various communication services under better environment.”

2:10-14 → “The wireless internet service is an enhanced personalization service resulted from the usage of private terminals and, therefore, a service which may provide the specific information to the subscriber based on the subscriber’s mobility.”

2:17-21 → “. . . the positioning of various portable terminals . . .”

2:21-3:2 → “As the mobile communication technology, the internet technology, the portable terminal technology, the information processing technology such as the geographical information system (GIS), the global positioning system (GPS) and the intelligent transport system (ITS), various content-related technologies have been gradually integrated, the LBS is expected to create explosive demand.”

4. These numerous examples found in the first two pages of the application are ample evidence that the specification, in its entirety, is not clearly written. A substitute specification in

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proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

5. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. Applicant submits that Figure 1 is not "prior art" in the United States under paragraph 102. The applicant's argument is not persuasive. Figure 1 is described solely under the heading "Background of the Invention" and shows only that which is already known in the art. For example, each of the GPS constellation 110, mobile communication terminal 120, a BTS 130, a BSC 140, a MSC 150 and a PDE 160 are already known in the prior art. Applicant has provided no evidence that Figure 1 represents anything that is new in the art. Moreover, contrary to the applicant's remarks, the specification describes Figure 1 as "schematically illustrating a conventional global positioning system (GPS) terminal positioning system by using a GPS", see page 9. Thus, the applicant's traversal of the requirement to label Figure 1 as Prior Art is not persuasive and the requirement is maintained.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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8. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 1, step (c), the *“calculating a chip-based pseudo noise code phase from the information on the reference pilot signal or the LD pilot signals transmitted to the PDE”* is insufficiently disclosed in the specification. The applicant points to Figure 5 and the specification (filed 7/20/06) at 25:21-27:19 to show the enablement. However, the Examiner is not convinced that such portions sufficiently enable the subject matter. Firstly, Figure 5 merely encloses the claim language of step (c) in a box S506 of a flow diagram but fails to disclose how this is done. The mere repetition of language in a boxed representation of a flow diagram is insufficient to show someone skilled in the art to make and or use the invention with respect to said step. Secondly, the cited specification fails to address anything with respect to calculating a chip-based PN code phase. With regard to step (d), the specification is insufficiently disclosed with respect to how a *“pseudo noise code phase”* is determined or not determined to be representative of *“a code phase allocated for position determination.”* Again, applicant points to Figure 5 and the specification at 26:1-8 to show the enablement. Again, boxed elements S508 and S510 merely reiterate the claim language but lack a sufficient showing of how this step is performed. The specification at 26:1-8 is equally silent as to the determination of how a *“pseudo noise code phase”* is determined or not determined to be representative of *“a code phase allocated for position determination.”* Lastly, neither Figure 5/S512 nor the specification at 26:9-27:19 provide an enabling disclosure for obtaining location information on the GPS terminal by using

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the code phase transmitted to the LD mapping server. It is noted that the specification concludes on page 27, line 9. Thus, the applicant appears to be referring to different specification. The apparatus claims are insufficiently disclosed for the same reasons as set forth above.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. The language “location detectors” remains misdescriptive since the LDs are described by the claims as generating pilot signals; thus, the use of the terminology “detectors” is misdescriptive. Applicant fails to address the rejection of the claim on the basis of the misdescriptive nature of the term “location detectors” particularly in light of the failure of the devices to do any detection but rather are a source of LD signals. Instead, applicants appear to address what they believe is an insufficiency of disclosure, which is not the rejection provided under this heading. Although it is recognized that the applicant may be his/her own lexicographer, the use of a term that is inconsistent with the accepted meaning, i.e. redefines the meaning away from their ordinary meaning, requires that the applicant clearly express that intent in the written description. Examiner cannot find a clear expression of such in the specification as originally filed.

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12. In claim 1, step (a) the language “allowing the GPS terminal . . . to obtain” remains indefinite. Applicant argues that the language has been changed however, there is no indication in the claims filed 6/12/09 that such amendment has been made. The rejection is maintained.

13. In claim 1, step (b) “transmitting information” remains indefinite. Applicant argues that the specification describes such. However, the rejection is not that the claims are insufficiently disclosed, but rather that the claim language fails to clearly and distinctly set forth the metes and bounds of the subject matter with respect to what the “transmitting information” represents. The rejection is maintained.

14. Claim 16 is rejected since it is contrary to the limitations of the independent claim from which it depends. The applicant argues that the “satellite invisible area” limitation has been removed, however, the presented claim still has such present in the claim. Thus, the rejection is maintained.

15. The apparatus claims 17 and 30 contain similar problems as the method claims.

16. Claims 16 and 30 cannot be examined with respect to art since the language therein is contradictory to the claims from which they depend. Applicant argues that the limitation with respect to “in a GPS satellite-invisible area” has been removed from the independent claims, but it is noted that such language remains in the independent claims presented in the amendment of 6/12/09. Thus, the rejection is maintained. It is furthermore noted, that Stein et al teach a system and method wherein the mobile terminal is operable outside in view of GPS satellites as well as indoors wherein the satellites are not visible as well as a hybrid mode wherein satellites and repeater/base stations are capable of being used. Thus, correction of the 35 USC 112, 2nd par. Rejection would not make the claim allowable.

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17. It is noted that in the most recent amendment, the applicant has substantially reverted to the original claims.

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

19. Claims 1-15, 17-29 and 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Stein et al (7,139,580).

20. Stein et al teach a system and method for determining the position of a terminal 106 (Figure 7) which may be an integrated CDMA cell phone/GPS receiver and which is capable of receiving signals from any combination of signals from a plurality of LDs in the form of base stations 104 and/or repeaters 114 as well as from GPS sources (3:1-49), and which terminal is capable of transmitting information to a PDE 130 (Figure 8) which obtains location information on the terminal (3:50-56). The mobile terminal is allowed/obtains signals from the LDs transmitting reference/pilot signals if the mobile terminal is within the coverage area of the LD (4:55-67). Each repeater covers a small area and is uniquely identified by an identification code comprising pseudo-noise sequences at defined offsets (5:1-28). The cellular techniques are applicable with IS-95, CDMA2000, W-CDMA, IS-801, GSM, TDMA etc. (5:54-58 and 23:57-24:16). The PDE maintains a mapping server which obtains location information based on PN sequence information (7:14-25). Each respective LD station transmits a PN code sequence with an offset associated with the chip index (8:4-50 and Figure 2) to uniquely identify the station wherein the PN generator is provided with a clock signal at multiple times the PN chip rate (11:58-12:5). One or more PN sequences may be combined (12:50-65). The LD station signal(s) received at the mobile terminal must inherently not be smaller than a predetermined value in for

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the mobile terminal to be capable of detecting such (12:35-50 and 17:65-18:7). The terminal 106 calculates a chip-based pseudo-noise code phase which is forwarded to the PDE in order to uniquely identify the station(s) and thus provide for a location determination (21:39-22:34).

21. Applicant argues that the prior art does “not appear to fairly disclose *calculating a chip-based pseudo noise code phase from the information on the reference pilot signal or the LD pilot signals transmitted to the PDE.*” Applicant argues that the use of the PN sequences in Stein et al is a disclosure of the above-mentioned claim language.

22. The applicant’s argument has been considered but is not persuasive. Stein et al clearly describe the nature of the PN coded pilot reference signals wherein each chip of the PN sequence is assigned a PN chip index (numbered 0-32,767) and wherein the PN sequence is further partitioned into 512 different offsets (numbered 0-511) with each of the different offsets representing a unique station identifier. The different code offsets represent the claimed code phases. Therefore, when the mobile terminal, as exemplified in Figure 7, receives and processes the LD station signals, a demodulator 724 is directed to search for the PN over a particular range of chip offsets to provide the identification of the LD station(s) wherein the search correlates the received signal samples with a locally generated PN sequence at various offsets (21:50-22:34).

Figure 8 and its relevant description in the specification describe the nature of the PDE to correlate the identification information and other data to a mapping server for obtaining location information on the terminal. Since the transmitted signal from an LD station, i.e. the repeater, is a chip-based PN coded sequence with a specific code offset (phase), the detection of the specific code offset (phase) is likewise chip-based. Thus, contrary to the applicant's allegation, Stein et al do disclose the mobile terminal calculating a chip-based pseudo noise code phase from the

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received LD signal and the applicant has failed to show how claim limitations distinguish over the prior art to Stein et al. The applicant's argument that the dependent claims are patentable in light of the fact that the independent claims are allowable.

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (571)-272-6973. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory C. Issing/
Primary Examiner
Art Unit 3662

gci